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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,066	01/31/2002	Robert W. Aukerman	P 1028.11004	2497

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 01/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,066

Applicant(s)

AUKERMAN, ROBERT W.

Examiner

Leonard S Liang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "30" has been used to designate both a system and a controller. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

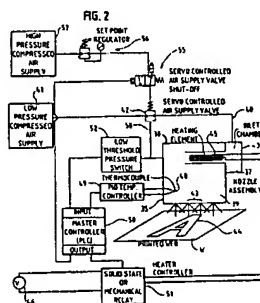
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Mudry (US Pat 6176184).

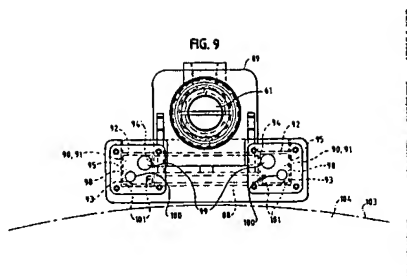
Mudry discloses:

- {claim 1} An ink drying system (column 1, lines 5-9), coupled to a source of pressurized gas (figure 2, references 41, 57),

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and comprising a plurality of plenums (figure 9, references 90),



each plenum including an associated plurality of orifices (figure 9, reference 101); a plurality of fluid flow valves for controlling fluid communication between the plenums and the source of pressurized gas (figure 2, reference 42); a controller (figure 2, reference 56; column 3, lines 29-52)

- {claim 2} drying portions provide substantially complete laterally extending coverage of the sheet (figure 2, references 39, 43 W; column 4, lines 63-67) and wherein the drying portion of at least one of the plenums provides a substantially different range of laterally extending coverage of the sheet than at least one other of the plenums (figure 9, references 90)
- {claim 3} at least two of the plenums are spaced substantially apart from one another in a direction of travel of the sheet by a predetermined distance (figure 9, references 90; column 4, lines 42-52) and wherein the drying portions of the plenums are each substantially laterally co-extensive (figure 9, references 90; column 4, lines 63-67; column 5, lines 1-2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mudry (US Pat 6176184) in view of Gershony et al (US Pat 6266079).

Mudry discloses, with respect to claims 4-5 and 7, an ink drying system, wherein the drying portions provide substantially complete laterally extending coverage of the sheet; providing a first and second plenum wherein the plenums each include an associated plurality of orifices (as taught in claims 1 and 2 above); and the controller “allowing the efficient adjustment and inspection of the individual dryer systems” (column 3, lines 47-49; thus implying that it is inherent to the invention that the controller can be adapted to select one plenum to receive more pressurized gas than another plenum).

Mudry differs from the claimed invention in that it does not disclose that a quantity of the ink is defined by a spatially varying distribution; identifying a spatially varying distribution of the ink; identifying one of the plenums for which the orifices most closely matches the distribution; selecting one plenum to receive more of the pressurized gas than the other of the plenums.

Gershony et al discloses, with respect to claims 4-5 and 7, a spatially varying distribution (column 3, lines 43-63). Gershony et al teaches that “It is, therefore, desirable to be able to finely vary the size of each half-tone spot, so that it can, by itself, reproduce any of a large number of shades...” (column 3, lines 59-63)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Gershony et al into the invention of Mudry so that a quantity of ink is defined by a spatially varying distribution. The motivation for the skilled artisan in doing so is to gain the benefit of being able to finely vary the size of each half-tone spot, as taught above. It is inherent to the combined invention that areas of greater ink distribution would take longer to dry and would need to receive more pressurized gas in order to properly dry. Thus, the combined invention naturally suggests that the controller is adapted, based on the distribution, to select one of the plurality of plenums to receive more of the pressurized gas than at least some of the other plenums.

Allowable Subject Matter

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4. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 includes the limitation “wherein the second amount of the pressurized gas is predetermined based on the first amount, and wherein the difference between the first time and the second time is substantially equal to the distance divided by the speed of travel of the sheet,” which was not found, taught, or suggested in the prior arts.

Claim 8 is allowed.

The primary reason for the allowance of claim 8 is the inclusion of the method step of “selecting the other of the two plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein the second amount of the pressurized gas is predetermined based on the first amount, and wherein the difference between the first time and the second time is substantially equal to the distance divided by the speed of travel of the sheet.” It is this step found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Response to Arguments

5. Applicant's arguments filed on 10/15/02 have been fully considered but they are not persuasive.

The applicant submits that Mudry does not appear to disclose a plurality of fluid flow valves controlled by the claimed controller, nor does it appear to disclose any alternative structure that is capable of independently controlling fluid flow in a plurality of plenums. However, in column 2, lines 30-34, Mudry teaches that “A single between color dryer 32 is mounted on the side frames 22 downstream of each of the first seven color decks 23 for drying the ink which is applied to the web by the individual plate cylinders 25.” Thus, it is implied that the drying system of Mudry consists of **multiple** between color dryers; figure 2 only displays one such dryer. Thus, it is clear that there are a plurality of fluid control valves (corresponding to the plurality of dryers). Furthermore, Mudry teaches “A further benefit of this association is

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the ability to locate the set-point regulator 56 remotely, thus allowing the efficient adjustment and inspection of the **individual** dryer systems. Thus, Mudry does teach that the controller is capable of independently controlling the plurality of valves.

The applicant also submits that the combination of Mudry in view of Gershony is improper because "Gershony is inapposite. Gershony pertains to printing, not drying. On the other hand, the claims pertain to drying, not printing. Regardless of Gershony's teachings regarding ink spot size, Gershony does not teach or suggest how to dry the ink" However, Mudry discloses both drying and printing. Mudry relates to a dryer for a printing press (and not something completely unrelated, such as a hair dryer) Furthermore, the limitations missing from Mudry are directed at an ink property (quantity of ink is defined by a spatially varying distribution) and not the action of drying itself. Since Gershony discloses an ink used for printing, it is proper to combine the ink properties (i.e. spatially varying distribution) of Gershony with the drying actions of Mudry.

Final Rejection

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Crystal et al (US Pat 6308626) discloses a convertible media dryer for a large format ink jet print engine.

DeMoore et al (US Pat 6293196) discloses a high velocity, hot air dryer and extractor.

Reed et al (GB Pat 2126974A) discloses a device for supporting a web on a bed of air.

Barta et al (US Pat 3737088) discloses a web processing apparatus.

Mallinson (US Pat 4233901) discloses drying printed web material.

Van Den Berg (US Pat 5086700) discloses a drying/curing apparatus for printing presses.

Fuqua (US Pat 6152030) discloses a curing apparatus for a multi-color screen printing system.

Rasmussen et al (US Pat 6168269) discloses a heated inkjet print media support system.

Freund et al (US Pat 6382850) discloses an ink jet printer for photofinishing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

lsl *lsl*

December 19, 2002


John Barlow
Supervisory Patent Examiner
Technology Center 2800